

ABSTRACT

A system for effective NO_x control in a diesel or other lean burn internal combustion engine is presented. The system includes a urea-based SCR catalyst having an oxidation catalyst coupled upstream of it and an ALNC coupled upstream of the oxidation catalyst. This system configuration results in improved NO_x conversion due to faster SCR catalyst warm-up and higher operating temperatures. Additionally, placing the ALNC upstream of the oxidation catalyst prevents hydrocarbon slip into the SCR catalyst at low exhaust gas temperatures. Also, system reliability is improved by adding an auxiliary NO_x aftertreatment device.

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